

The Municipal Role in Public Water Supply Protection

Resolve, Chapter 140
Second Meeting



Meeting Agenda

- 9:00 Welcome Introductions Name and Affiliation
- If you attended the September 14 meeting, what were your impressions?
- 9:20 Review of the Agenda
- 9:25 Presentation on municipal-level source protection – Andy Tolman
- 10:00 Costs of No Wellhead Protection – David Braley
- 10:15 Clarifying Questions about the Presentations from the Floor
- 10:30 Break
- 10:45 Small Group Discussion
 - positive reactions to the picture painted in the Presentation
 - negative reactions to the picture
- 11:15: Report Back from Each Small Discussion Group: Identify areas of consensus
- 11:45: Focusing on the Resolve and given the content of today's meeting, what are our next steps?
- 12:00:Adjourn

Recommendations

- Establish consistent policies among all State agencies to enhance source protection in all state decision making, development, and practices.
- Create an effective program to maintain agricultural and forestry land uses in source protection areas
- **Mitigate the effects of existing and new development on drinking water quality through the use of education, incentives, and enforcement**

Components of Recommendation 3

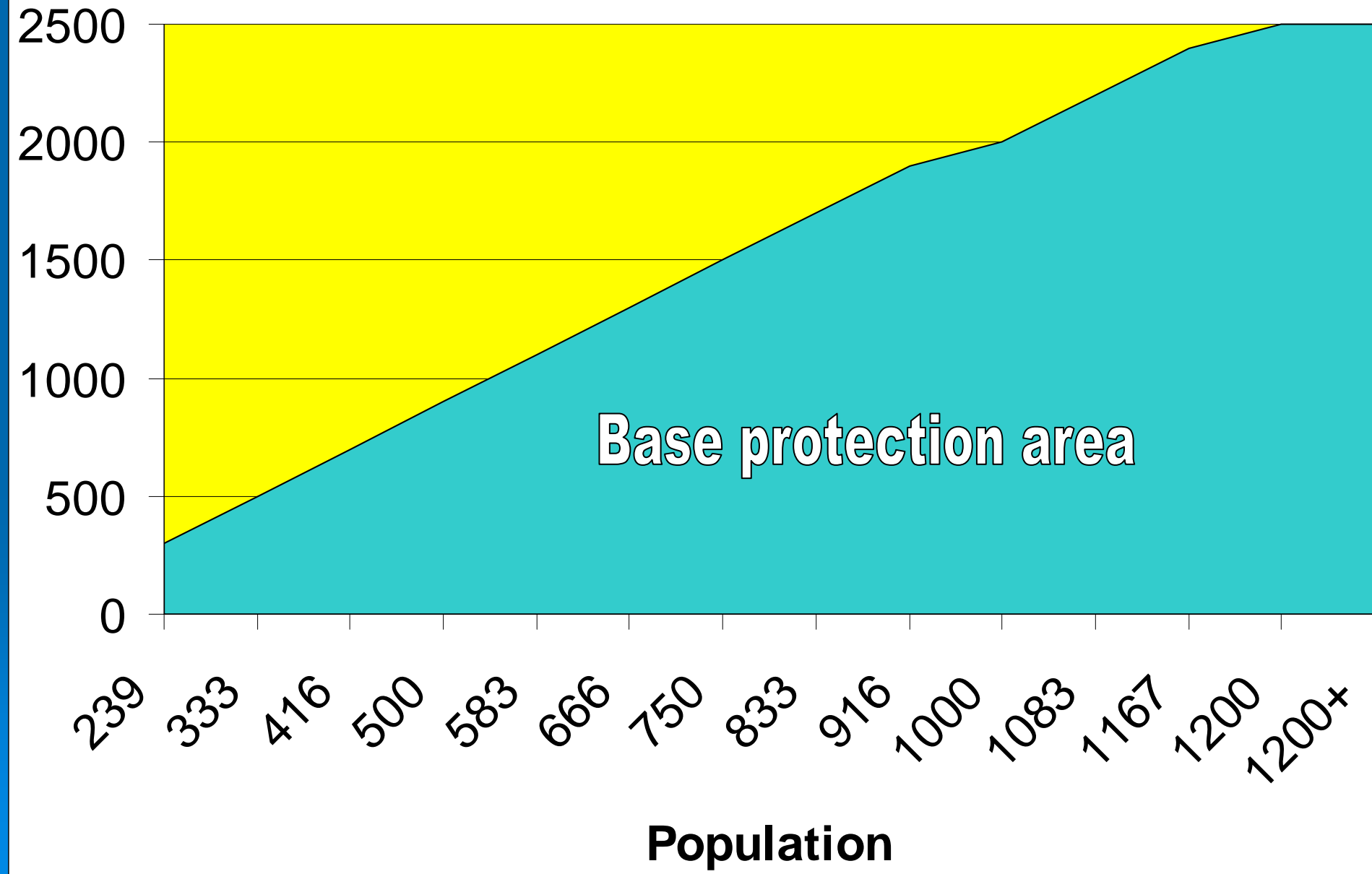
- Encourage **active management (BMP's)** of existing potentially threatening uses in source protection areas through **municipal, PWS and state inspection of activities.**
- Develop a plan to target enforcement of existing environmental laws in source protection areas
- Add proximity to public water supplies as a review criterion for environmental review programs, particularly NRPA and Site Location
- **Set minimum standards for local source protection ordinances**
- **Amend PL 761 to require that a PWS's written response to notification of proposed changes in land use activities in source protection areas be required prior to approval of a local permit**

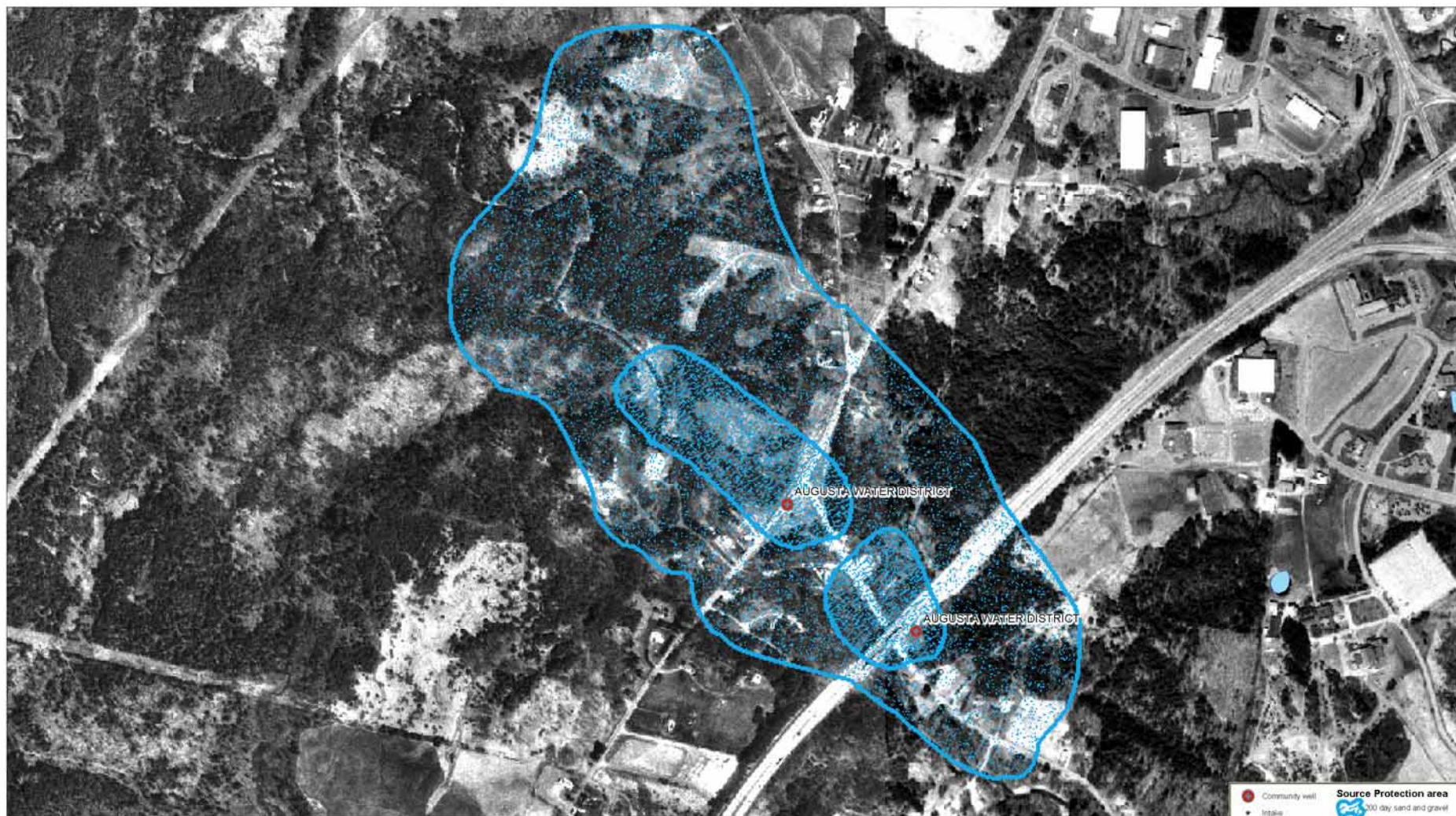
Types of Groundwater Protection Areas

- Calculated radius Circles (small Community and Non-Transient Non Community wells)
- Time of Travel estimates (Community sand and gravel wells)
- Probability of contribution estimates (community bedrock wells)



Small System Protection radius





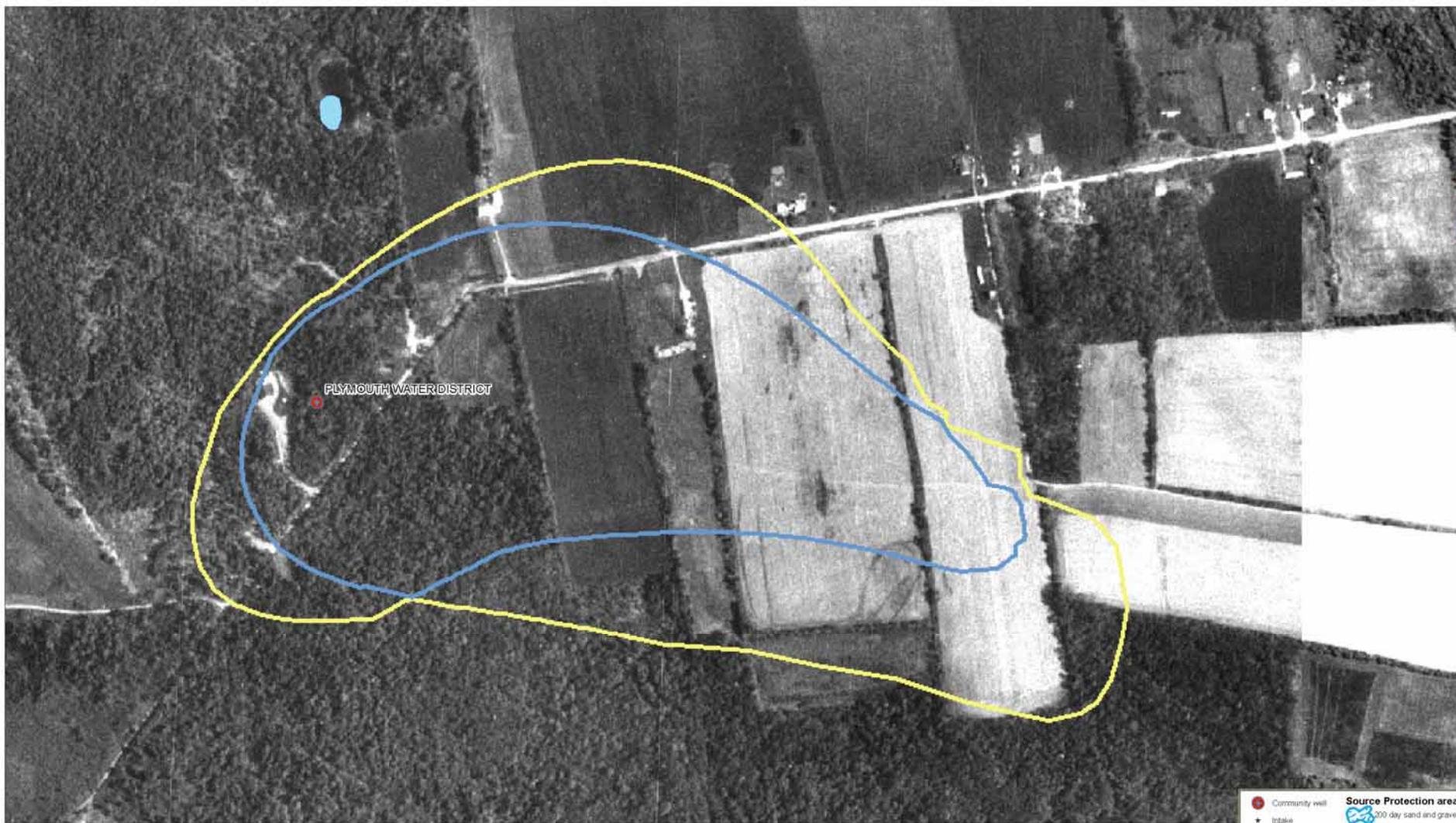
Scale bar



Public Water Supply Protection Areas



- Community well
 - Intake
 - Non-Community well
 - School or factory well
- Source Protection area**
- 100 day sand and gravel
 - 500 day sand and gravel
 - High probability bedrock
 - moderate probability bedrock
 - AWD boundary



Public Water Supply Protection Areas



<ul style="list-style-type: none">Community wellIntakeNon-Community wellSchool or factory well	Source Protection Areas <ul style="list-style-type: none">High probability bedrockModerate probability bedrock
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Basic features of zoning

- Exclude new contaminant sources from inner zone
- Manage (BMP's) and inspect existing sources
- Require BMP's for new sources in outer zone
- Inspect existing sources

Types of Contaminants

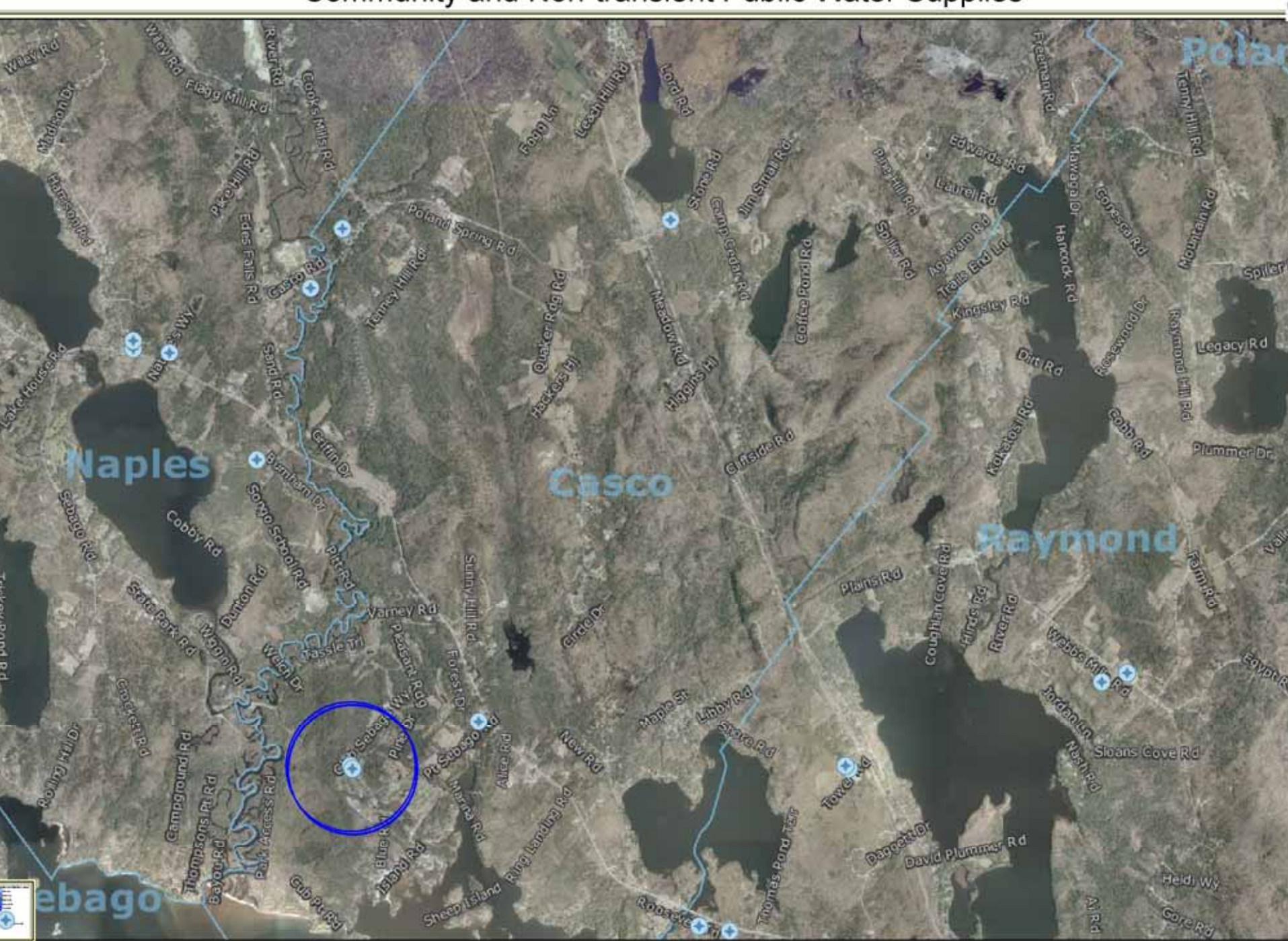
- Bacteria: primarily from septic systems, usually covered by Plumbing Code
- Petroleum Products: new commercial sources regulated by DEP. Domestic storage and use are not regulated
- Other toxics: large quantities regulated by DEP, household and small commercial not regulated
- Nitrates/pesticides: agronomic use regulated, homeowner unregulated

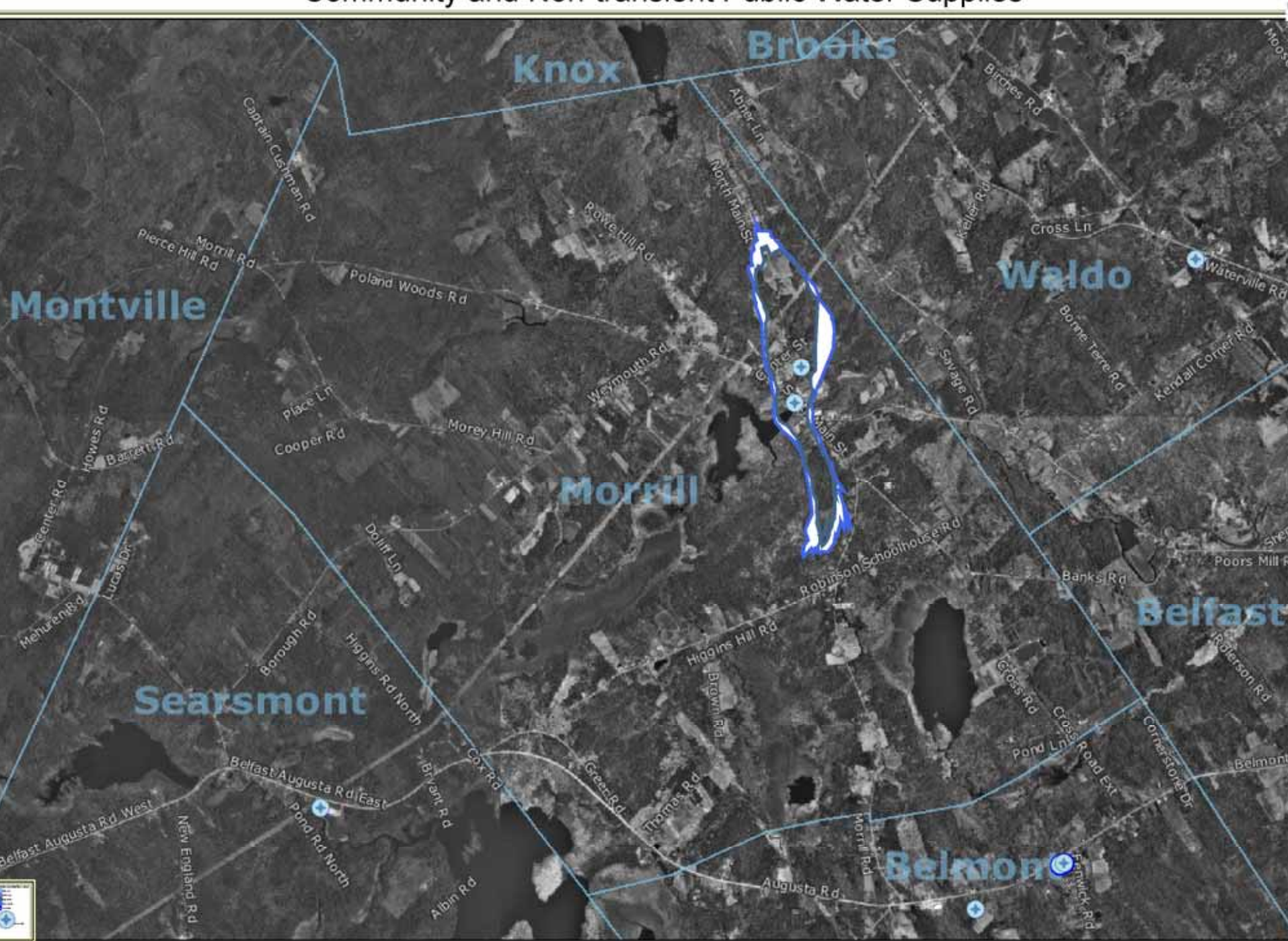
What is crucial to protect at the municipal level?

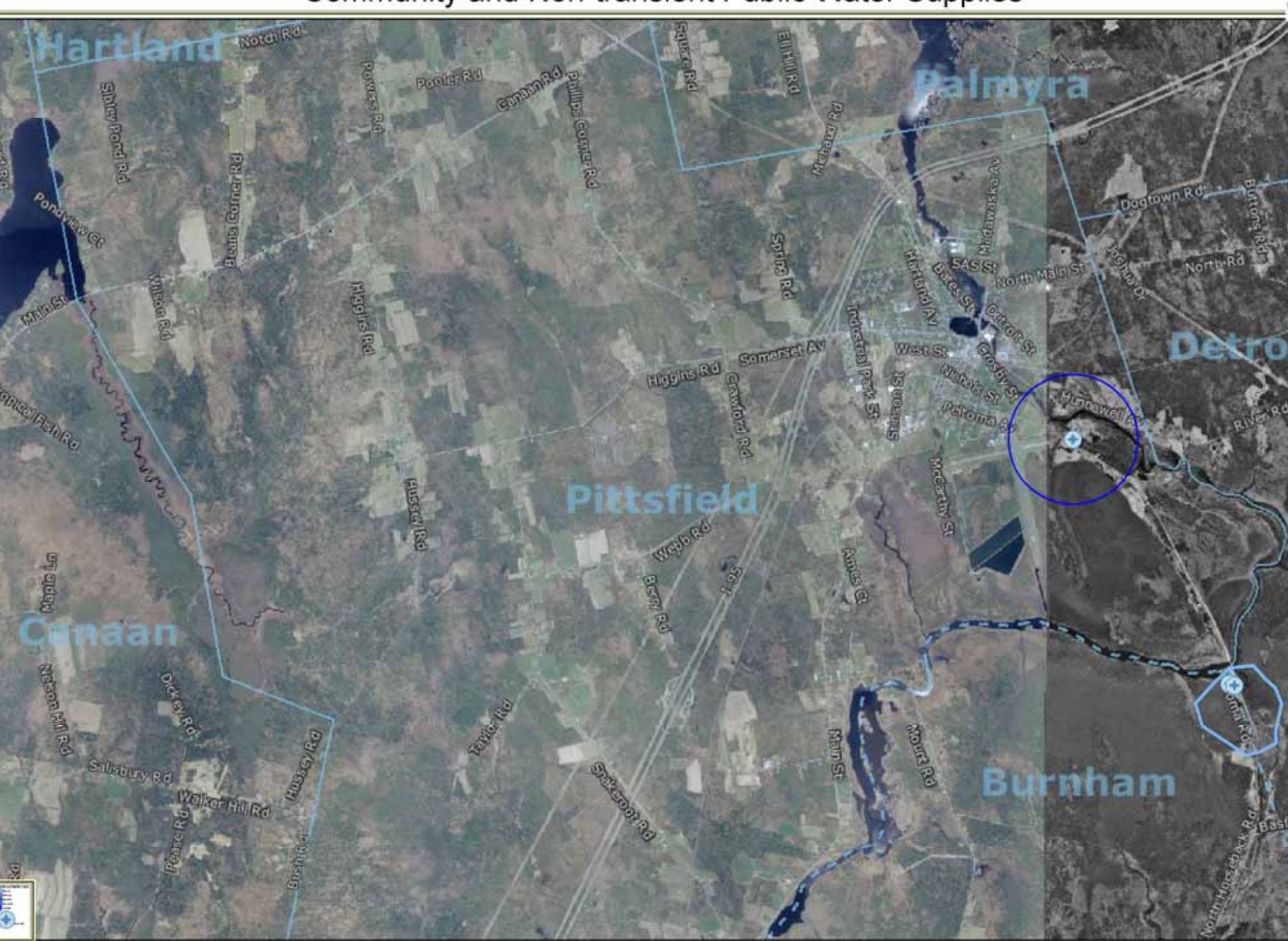
- Community groundwater supplies: 324
- Non-community non-transient supplies (schools, hospitals, large workplaces): ~370 suppliers
- Primary Protection areas for these systems cover an average of 0.35% of 327 towns
- 23 of the 31 towns with more than 1% land area in protection areas have ordinances

Top 20 Towns

Town	percent	ordinance?
Brunswick	7.44%	yes
Sanford	5.09%	yes
Castine	4.53%	yes
Hodgdon	4.21%	yes
North Yarmouth	3.40%	yes
Morrill	3.03%	no
South Berwick	2.64%	yes
Clinton	2.27%	yes
Casco	2.03%	no
Cornish	2.01%	yes
Island Falls	1.94%	yes
Enfield	1.90%	yes
Paris	1.81%	yes
Calais	1.78%	yes
Gray	1.69%	yes
Limerick	1.60%	yes
Alfred	1.48%	yes
Lisbon	1.47%	yes
Limestone	1.46%	yes







What's working

- Most larger systems have protection plans, often involving municipal ordinances
- DEP regulations cover significant new contaminant sources near PWS's
- Plumbing Code, properly enforced, reduces bacterial risks


What needs to Change

- Small systems (nursing homes, trailer parks, schools) do not have the ability to get municipal help to protect their sources
- Systems with multi-town protection areas have great difficulty in dealing with the neighboring town
- Residential chemical/petroleum use near water supplies is not regulated
- Adoption of basic overlay zones would focus attention on the need to protect these assets

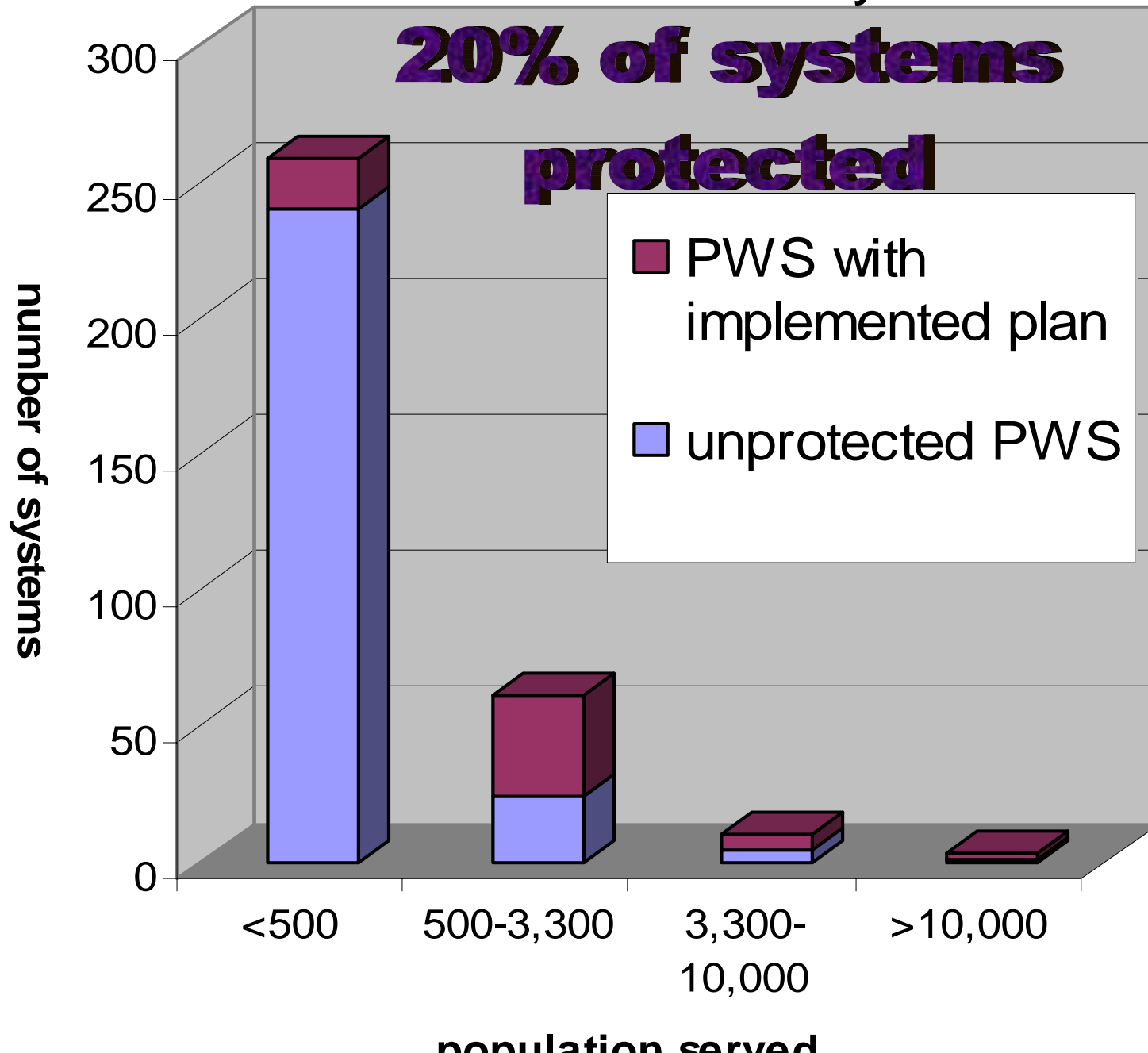
Other New England States

- Vermont: protection in place for 99% of systems through state requirements.
- MA: minimum ordinance required for all community systems, 100% implemented
- NH: All new sources require ownership or zoning, existing sources protection authorized, about 40% of systems (60% of population) protected
- RI: All systems protected
- CT: statewide aquifer protection zoning, most large systems own their inner zone.

Summary

- Most large systems are working with municipalities, and have had some success
 - Smaller community and NTNC systems are not protected.
 - Municipal awareness of water supplies as a consideration is a key part of the fabric of protection
 - The areas that need aggressive protection are relatively small and very important
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- The background of the slide is a solid blue color. In the lower right quadrant, there are several concentric circles of varying shades of blue, resembling ripples on water. These circles are centered around the bottom right corner and extend towards the middle of the slide.

Source protection status
Groundwater Community PWS



Next Steps

- Clarifying questions?
- Small Group Discussion: reactions to the situation
- Report out
- Plan next meeting



Recommendations

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